

ANNOTATIONES ZOOLOGICAE JAPONENSES

Volume 56, No. 4—December 1983

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Published by the Zoological Society of Japan

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A New Japanese Species of the Genus *Liothrips* UZEL  
(Thysanoptera, Phlaeothripidae)  
Injuring *Wasabia japonica* MATSUMURA

*With 5 Text-figures*

Kazuo HAGA

*Institute of Biological Sciences, University of Tsukuba,  
Sakura-mura, Ibaraki 305, Japan*

and

Shûji OKAJIMA

*Laboratory of Entomology, Tokyo University of Agriculture,  
Sakuragaoka, Setagaya-ku, Tokyo 156, Japan*

**ABSTRACT** A new species of the genus *Liothrips* UZEL is described and illustrated. It injures *Wasabia japonica* MATSUMURA cultivated in the mountain area of the Chûgoku Province, western Japan.

Considerable damages have been brought about by an unidentified species of the genus *Liothrips* UZEL on a cruciferous plant, *Wasabia japonica* MATSUMURA, cultivated for spicery in the mountain area of the Chûgoku Province, western Japan, for about fifteen years. It injures not only the leaves but also the underground part of stems and tubers, and the arrhenotokous parthenogenesis often takes place (ISHII and KITAMURA, 1975).

In this paper we will describe this economically important species as new to science.

*Liothrips wasabiae* sp. nov.

*Female (macropterous).* Body blackish brown; all tarsi, foretibiae and distal portion of forefemora yellowish brown; distal two-fifths of mid and hind tibiae somewhat paler; antennal segments I and II blackish brown, segment III yellow, IV, V and VI brownish yellow, apical half of VI shaded, VII and VIII brown. Prominent body setae dark brown; major setae of abdominal segment IX and terminal hairs brown.

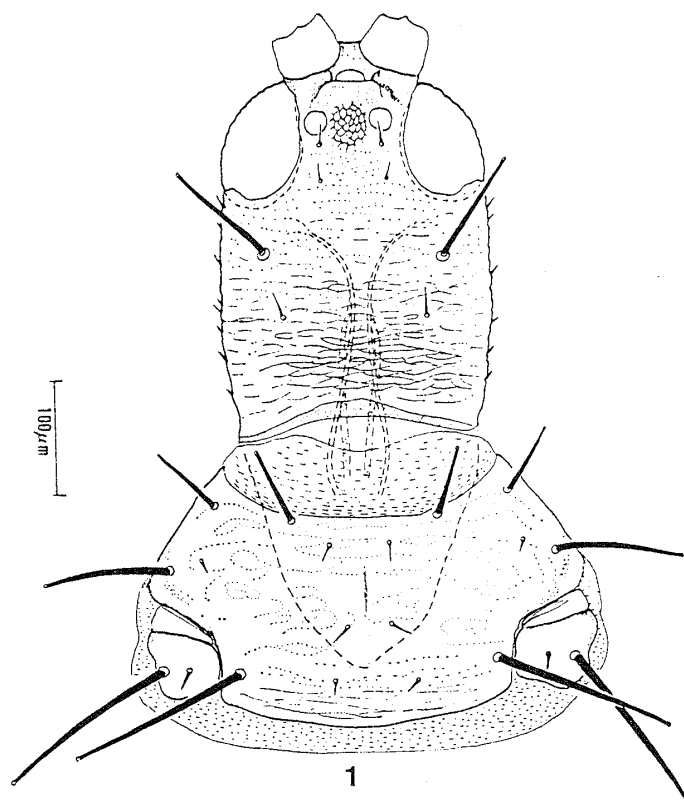


Fig. 1. *Liothrips wasabiae* sp. nov.; head and prothorax.

Head about 1.25 times as long as wide; cheeks setose, almost parallel-sided, clearly constricted at base; postocular setae thick, slightly dilated at tip; dorsum of head with transversely anastomosing striae, with two pairs of postocellar setae arranging longitudinally and short mid dorsal setae situated between postocular setae. Eyes less than one-third as long as head; anterior ocellus overhanging apically; posterior ocelli situated at apical third of the eye length. Antennae moderately elongate; segment III asymmetric, convex only outer laterally; segment VIII not constricted at base; sense-cone formula from segment III to VI:  $0+1$ ,  $1+2$ ,  $1+1^{+1}$ ,  $1+1^{+1}$ .

Pronotum 0.6 times as long as head, with indistinct curled striae; all pronotal setae thickly developed; anteromarginal setae longer than anteroangular setae; epimeral suture complete. Forefemora not widened, nearly parallel-sided; foretibiae and foretarsi simple and unarmed. Mesonotum with a pair of thick setae near the wing bases; subbasal wing setae well developed, arranging on a line;  $B_2$  the longest, situated nearer to  $B_1$  than to  $B_3$ . Wings infuscated, darker at base and along longitudinal stripe; forewing with 12–16 duplicated cilia. Praepectus absent; prospinasternum round, with a short bar; mesopraesternum boat-like, with extremely narrowed median part; sternopleural suture shortly present.

Pelta bell-shaped with circular striae but indistinct posteriorly; each two pairs

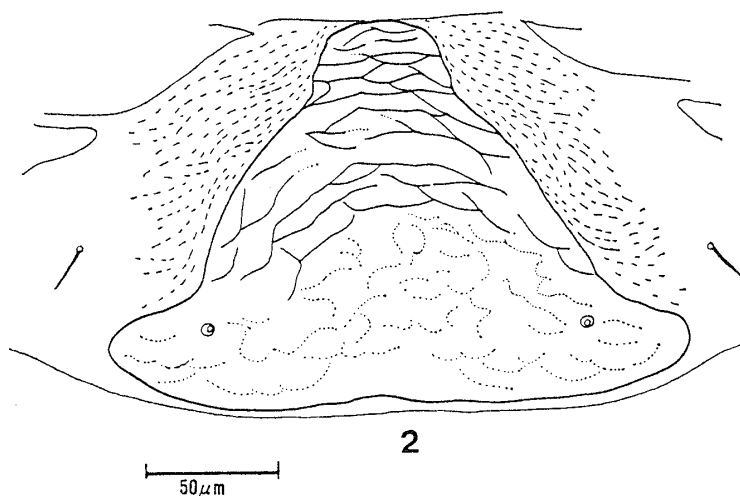


Fig. 2. *Liothrips wasabiae* sp. nov.; pelta.

of wing retaining setae on abdominal segments II to VII; major setae of segment IX less stout and pointed at tip; tube subequal to or longer than head, tapering towards apex.

Measurements of a female in  $\mu\text{m}$ . Total body length 3020. Head length 285, width across eyes 225, at base 195; eye length 105, width 70; pronotum length 175, width 350; forefemur length 285, width 90; foretibia length 270, width 58; foretarsus length 130, width 45; pterothorax length 475, width 590; forewing length 1310, width 115; pelta length 145, width 220; abdominal segment II length 155, width 565; IV length 155, width 575; VI length 155, width 530; VIII length 165, width 385; IX length 140, width 255 tapering to 170; tube length 300, width at base 110, at apex 60.

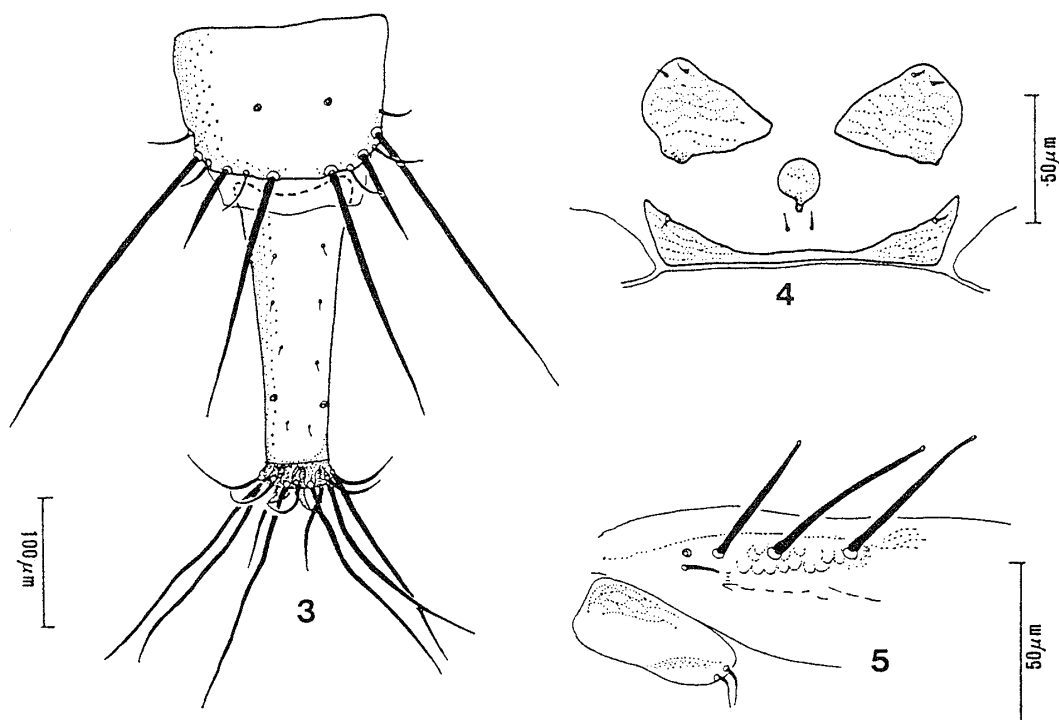
Length of setae: Postoculars 90. Pronotal anteroangulars 68, anteromarginals 73, midlaterals 115, epimerals 158, posteroangulars 155. Forecoxals 53. Forewing  $B_1$  118,  $B_2$  148,  $B_3$  140. Abdominal segment IX  $B_1$  260,  $B_2$  290,  $B_3$  280; anal hairs 218–262.

Antennae: Total length approximately 600.

	I	II	III	IV	V	VI	VII	VIII
Length	50	65	105	100	95	95	80	48
Width	45	38	38	43	40	35	30	18
Sense-cone length	—	—	48	45–53	53–53	55–55	50	—

*Male (macropterous)*. Colour and general structure similar to those of the female. Number of duplicated forewing cilia less than those of female, 8–12,  $B_2$  of abdominal segment IX less than one-third as long as  $B_1$ .

Measurements of a male in  $\mu\text{m}$ . Total body length 2680. Head length 260, width across eyes 205, at base 185; eye length 100, width 60; pronotum length 160, width 350; forefemur length 215, width 80; foretibia length 235, width 48;



Figs. 3–5. *Liothrips wasabiae* sp. nov. — 3. Abdominal segment IX and tube. — 4. Sternal plates of pro- and mesothorax. — 5. Basal portion of right forewing.

foretarsus length 100, width 38; pterothorax length 420, width 500; forewing length 1065, width 90; pelta length 120, width 195; abdominal segment II length 140, width 495; IV length 135, width 490; VI length 140, width 430; VIII length 155, width 285; IX length 120, width 190 tapering to 150; tube length 280, width at base 90, at apex 55.

Length of setae: Postoculars 95. Pronotal anteroangulars 52, anteromarginals 72, midlaterals 110, epimerals 132, posteroangulars 128. Forecoxals 38. Forewing  $B_1$  98,  $B_2$  115,  $B_3$  105. Abdominal segment IX  $B_1$  245,  $B_2$  75,  $B_3$  300. Anal hairs 196–236.

Antennae: Total length approximately 550.

	I	II	III	IV	V	VI	VII	VIII
Length	50	65	95	88	83	83	70	43
Width	45	35	35	38	37	32	28	18
Sense-cone length	—	—	48	44–50	50–50	53–53	45	—

Holotype ♀: Japan. Masuda, Shimane-ken (reared in the laboratory of Shimane Agricultural Experiment Station, Izumo, Shimane-ken). T. MURAI leg., on *Wasabia japonica*, VI–VII, 1981. Paratypes 38 ♀♀, 17 ♂♂, same data as the holotype.

This new species belongs to the group comprising more than thirty Oriental species which have middle and hind tibiae for the major part dark, distinctly infuscated wings and pointed or narrowly rounded mouth-cone. However, the present species is peculiar among them by having setose cheeks and asymmetric figure of antennal segment III. Moreover, the host plant, *Wasabia japonica* is first recorded in the family Cruciferae as the food of *Liothrips* thrips.

#### ACKNOWLEDGEMENT

We wish to express our thanks to Mr. T. MURAI of Shimane Agricultural Experiment Station, Izumo, Shimane, for providing material.

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